

### REMARKS

Claims 26-59, 61-69, and 71-81 are pending, including new claims 74-81. Claims 1-25 have been canceled as being directed to a non-elected invention. The independent claims are claims 26, 49, and 80.

Claims 26 and 50 have each been amended to better clarify the meaning of the claimed "spiral structure." See, for example, Figure 1A from the specification showing a cross-section of photonic crystal waveguide 100 with alternating layers 130 and 140 forming a spiral around waveguide axis 199 coming out of the page (see also corresponding pages 8-9 from the specification).

We gratefully acknowledge the Examiner's indication that claims 28-29, 31, 33-35, 37-48, 52-53, 56, 58-60, and 62-73 would be allowable if rewritten to be in independent form. Accordingly, we have amended independent claim 49 to include the limitations of allowable dependent claim 70 (now canceled), and added new independent claim 80 corresponding to allowable dependent claims 65. Accordingly, we submit that independent claims 49 and 80 (and dependent claims 50-59, 61-69, 71-73, and 77-79, and 81 which depend there from) are in condition for allowance.

The only remaining independent claim, is claim 26, which requires "a fiber waveguide comprising alternating layers of different materials surrounding a core extending along a waveguide axis, wherein the alternating layers define a spiral structure in a cross-sectional plane perpendicular to the waveguide axis." The claim stands rejected as allegedly anticipated by U.S. Patent No. 4,478,486 ("Fentress"). We traverse.

The action points to sheet 22 and fiber 24 in Fentress as allegedly corresponding to the claimed alternating layers of the claimed fiber waveguide. But, sheet 22 is a completely separate from fiber 24 and not part of any fiber waveguide. Specifically, Fentress discloses using sheet 22 as part of a fiber organizer to wrap up excess length of fiber 24 while not bending fiber 24 below a set bending radius. Fiber 24 is laid on the sheet 22 and then sheet 22 is rolled around core 16 to take up the excess length of fiber 24. See, for example, Fentress at col. 5, lines 3-21 and Figs. 1 and 2.

Also see, for example, Figures 3-5 in Fentress showing how the fiber wrapped around core 16 within sheet 22 is coupled to input/output optical cables 10 and 12. Thus, the waveguide axis in the Fentress organizer is the core of the fiber, not core 16 of the Fentress fiber splice organizer as alleged in the action.

Thus, sheet 22 and fiber 24 in Fentress are not alternating layers of a fiber waveguide that surround a waveguide axis of the fiber waveguide, as claimed (let alone layers that further define the claimed spiral structure). Accordingly, we ask that the rejection be withdrawn and that claim 26 be allowed. The remaining claims depend from claim 26 and are allowable for at least the same reasons.

To address the issue raised in the action regarding the Oath/Declaration, we submit herewith a further copy of the Oath/Declaration in which the first named inventor (Gilles Benoit) has filled in his citizenship and initialed this addition.

We also transmit formal Drawings with this Reply under a separate cover to address to address the objection to the Drawings.

Finally, we thank the Examiner for acknowledging the Information Disclosure Statements ("IDS") received August 27, 2004 and November 17, 2005. We note that prior to the present action, an additional IDS dated March 8, 2006 was submitted. As explained in that IDS, the cited art corresponds to art raised by the Examiner in related application U.S. Serial No. 10/196,403, to which the present application claims benefit. In addition to reviewing that cited art, we invite the Examiner to review the positions taken by the Examiner in the 10/196,403 case, which file we presume the present Examiner has access to. (If that is not the case, we are happy to provide the Examiner with a copy of the file.) A further IDS is being submitted with the present Reply.

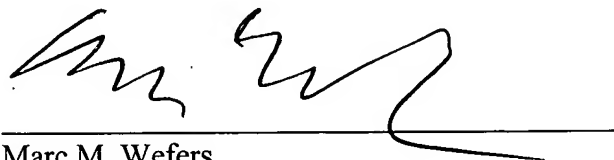
Applicant : Gilles Benoit et al.  
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Please apply any other charges or credits to deposit account 06-1050, referencing 13445-030001.

Date: 6/8/06

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Marc M. Wefers', written over a horizontal line.

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